California Cooperative
Snow Surveys
Bulletin 120-92

State of California
The Resources Agency

Department of
Water Resources

Water Conditions in California

Report 1 February 1, 1992

Douglas P. Wheeler
Secretary for Resources
The Resources Agency

Pete Wilson
Governor
State of California

David N. Kennedy
Director
Department of Water Resources

STATE OF CALIFORNIA

Pete Wilson, Governor

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COOPERATING AGENCIES

Public Agencies

Buena Vista Water Storage District
Central California Irrigation District
East Bay Municipal Utility District
Friant Water Users Association
Kaweah Delta Water Conservation District
Kern Delta Water District
Kings River Conservation District
Lower Tule River Irrigation District
Merced Irrigation District
Modesto Irrigation District
Nevada Irrigation District
North Kern Water Storage District
Northern California Power Agency
Oakdale Irrigation District
Omochumne-Hartnell Water District
Oroville-Wyandotte Irrigation District
Placer County Water Agency
Sacramento Municipal Utility District
South San Joaquin Irrigation District
Tri-Dam Project
Tulare Lake Basin Water Storage District
Turlock Irrigation District
Yuba County Water Agency

Private Organizations

J.G. Boswell Company
Kaweah River Association
Kings River Water Association
St. Johns River Association
Tule River Association
U.S. Tungsten Corporation
State Water Contractors

Public Utilities

Pacific Gas and Electric Company
Southern California Edison Company
Sierra Pacific Power Company

Municipalities

City of Bakersfield
Water Department
City of Los Angeles
Department of Water and Power
City and County of San Francisco
Hetch Hetchy Water and Power

State Agencies

California Department of Forestry
& Fire Protection
California Department of Water Resources

Federal Agencies

U.S. Department of Agriculture
Forest Service(14 National Forests)
Pacific Southwest Forest and Range
Experiment Station
Soil Conservation Service
U.S. Department of Commerce
National Weather Service
U.S. Department of Interior
Bureau of Reclamation
Geological Survey, Water Resources
Division
National Park Service(3 National Parks)
U.S. Department of Army
Corps of Engineers

Other Cooperative Programs

Nevada Cooperative Snow Surveys
Oregon Cooperative Snow Surveys

SUMMARY OF WATER CONDITIONS

February 1, 1992

Last February's edition of this report began as follows: "*With slightly more than half of the rainy season over, barring an unlikely turn around in weather patterns, it is evident that water year 1990-91 will be the fifth year of the drought.*" Except for the year and duration of the drought this statement is still valid today. Although the drought is continuing into a sixth year, current water conditions are a little better than one year ago.

FORECASTS statewide of April through July runoff are slightly less than half of average. There is not a wide range in runoff forecasts between regions.

SNOWPACK water content statewide is slightly under 50 percent of average for this date and 30 percent of the seasonal(April 1) average. Although low, the snowpack is better than last year's 20 percent of average at this time. Heaviest amounts, about 55 percent of the February 1 average, are found in the North Coast region. The snow packs in the Tulare Lake Basin and the North Lahontan regions are the lowest with 40 percent of normal for this date.

PRECIPITATION statewide is about 60 percent of average. Regional figures vary from near normal in the Colorado Desert area to slightly less than 50 percent of normal in the North Coast region. January precipitation was less than 50 percent of average. Last year, at this time, the statewide figure was only 25 percent of average. Eventually, thanks to a triple normal March, water year 1991 ended up with about 75 percent of average precipitation.

RUNOFF statewide for October 1, 1991 through January 31, 1992 is up about 10 percent over the corresponding period one year ago. However, runoff is still only about a quarter of normal. Regional runoff figures range from an estimated 50 percent of average in the South Lahontan region to 5 percent of average in the San Francisco Bay area. Seasonal statewide runoff on the first of February last year was a mere 15 percent of normal.

RESERVOIR STORAGE is somewhat better than it was at this time last year, despite prolonged sub-normal precipitation. Statewide reservoir storage at the beginning of February was about 55 percent of average, up from 50 percent a year ago. Highest percent of average storage is in the South Coast region, which is mainly used for regulation of imported water. Lowest relative storage, about 15 percent of average, is in the North Lahontan region. Central Coast storage is about 25 percent of average.

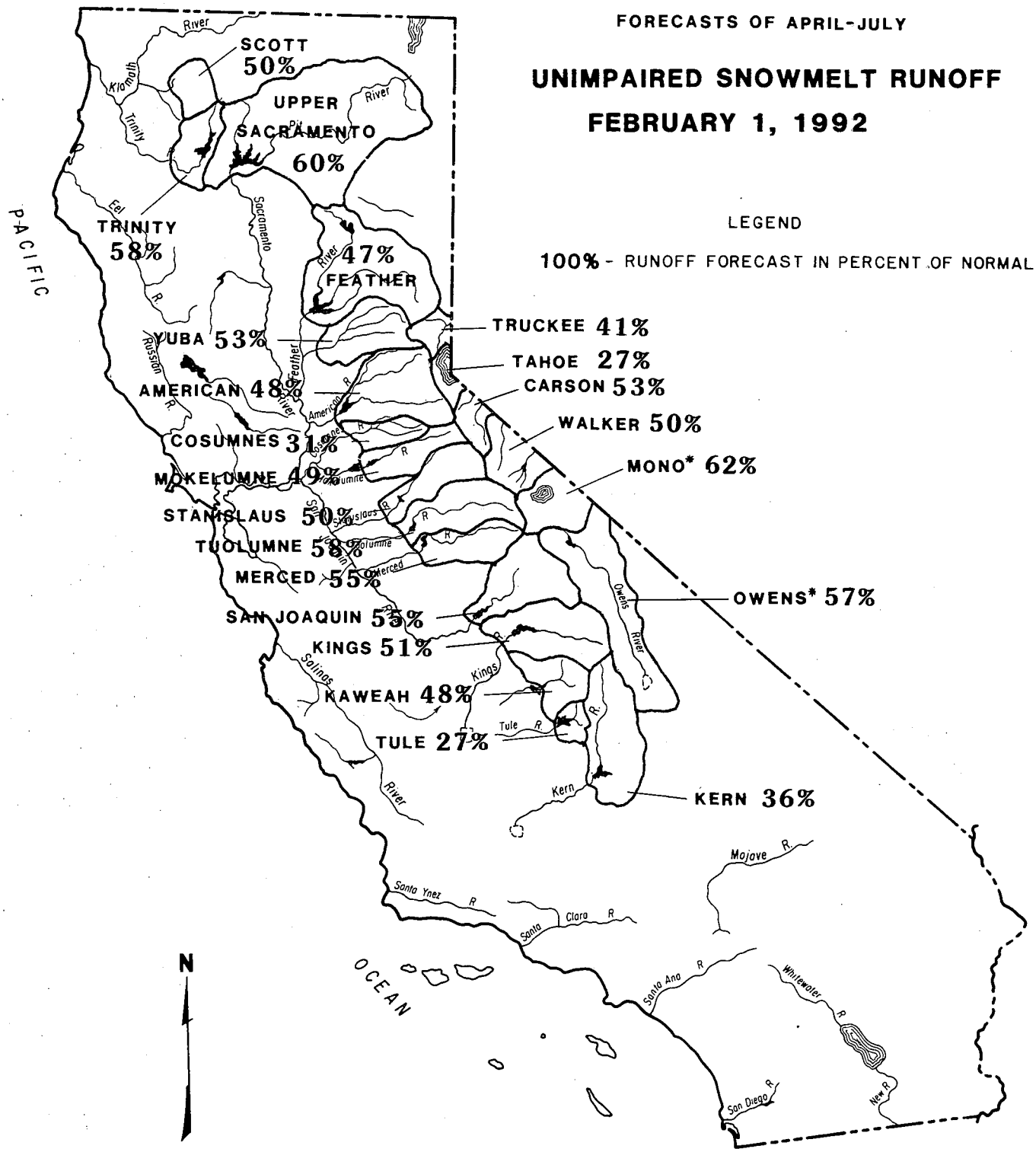
SUMMARY OF WATER CONDITIONS

IN PERCENT OF AVERAGE

HYDROGRAPHIC AREA	PRECIPITATION OCTOBER 1 TO DATE	SNOW WATER CONTENT	RESERVOIR STORAGE	OCTOBER 1 RUNOFF TO DATE	APRIL-JULY RUNOFF FORECAST	WATER YEAR RUNOFF FORECAST
NORTH COAST	45	55	40	15	55	45
SAN FRANCISCO BAY	55	--	70	5	--	--
CENTRAL COAST	75	--	25	15	--	--
SOUTH COAST	80	--	110	30	--	--
SACRAMENTO BASIN	50	50	55	30	50	45
SAN JOAQUIN BASIN	60	45	60	25	55	50
TULARE LAKE BASIN	65	40	40	35	45	45
NORTH LAHONTAN	50	40	15	45	50	50
SOUTH LAHONTAN	75	50	80	50	60	55
COLORADO DESERT	100	--	--	--	--	--
STATEWIDE	60	45	55	25	50	45

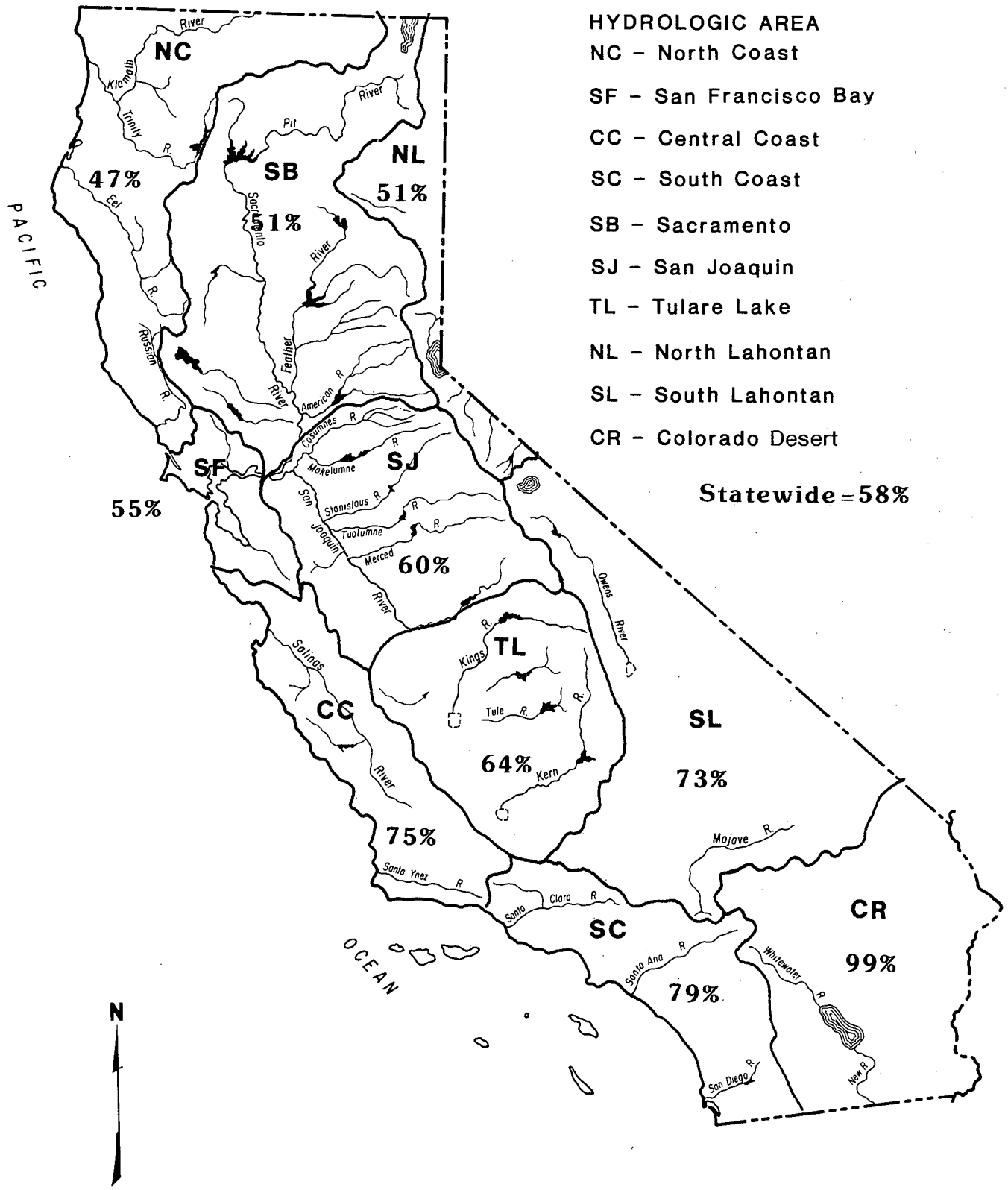
FORECASTS OF APRIL-JULY

UNIMPAIRED SNOWMELT RUNOFF
FEBRUARY 1, 1992



* FORECAST BY DEPARTMENT OF WATER AND POWER, CITY OF LOS ANGELES FOR THE PERIOD OF APRIL THROUGH SEPTEMBER

SEASONAL PRECIPITATION IN PERCENT OF AVERAGE TO DATE
OCTOBER 1, 1991 TO JANUARY 31, 1992



CALIFORNIA COOPERATIVE SNOW SURVEYS PROGRAM

FORECASTS OF APRIL-JULY UNIMPAIRED RUNOFF FOR CENTRAL VALLEY STREAMS FEBRUARY 1, 1992

DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Acre-Feet					
	HISTORICAL			FORECASTS		
	50 Year Average	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average	80% Prob. Range
SACRAMENTO RIVER BASIN						
Upper Sacramento River						
Sacramento River at Shasta Lake	297	702	39	165	56	
McCloud River at Shasta Lake	411	850	185	220	54	
Pit River at Shasta Lake	1,062	1,796	480	680	64	
Total inflow to Shasta Lake	1,824	3,189	726	1,100	60	770-1,900
Sacramento River above Bend Bridge, near Red Bluff	2,491	4,674	943	1,400	56	940-2,650
Feather River						
Feather River at Lake Almanor near Pratville	333	675	120	190	57	
North Fork at Pulga	1,028	2,416	243	500	49	
Middle Fork near Clio (3)	86	518	4	20	23	
South Fork at Ponderosa Dam	110	267	13	50	45	
Total inflow to Oroville Reservoir	1,857	4,676	392	870	47	420-1,900
Yuba River						
North Yuba below Goodyears Bar	286	647	51	150	52	
Inflow to Jackson Mdws and Bowman Reservoirs	112	236	25	60	54	
South Yuba at Langs Crossing	233	481	57	135	58	
Yuba River at Smartville	1,047	2,424	200	550	53	270-1,170
American River						
North Fork at North Fork Dam	262	716	43	120	46	
Middle Fork near Auburn	522	1,406	100	250	48	
Silver Creek below Camino Diversion Dam	173	386	37	85	49	
Total inflow to Folsom Reservoir	1,284	3,074	229	610	48	270-1,450
Sacramento River at Sacramento						
SAN JOAQUIN RIVER BASIN						
Cosumnes River at Michigan Bar	129	363	8	40	31	17-140
Mokelumne River						
North Fork near West Point (4)	437	829	104	220	50	
Total inflow to Pardee Reservoir	465	1,065	102	230	49	130-480
Stanislaus River						
Middle Fork below Beardsley Dam	334	702	64	180	54	
North Fork inflow to McKay's Point Dam	224	503	34	110	49	
Total inflow to Melones Reservoir	713	1,710	116	360	50	180-730
Tuolumne River						
Cherry Creek and Eleanor Creek near Hetch Hetchy	322	727	97	185	57	
Tuolumne River near Hetch Hetchy	606	1,392	153	370	61	
Total inflow to Don Pedro Reservoir	1,200	2,682	301	700	58	390-1,250
Merced River						
Merced River at Pohono Bridge	362	888	80	210	58	
Total inflow to Exchequer Reservoir	617	1,587	123	340	55	200-620
San Joaquin River						
San Joaquin River at Mammoth Pool (2)	1,014	2,279	235	550	54	
Big Creek below Huntington Lake (2)	95	264	11	50	53	
South Fork near Florence Lake (2)	202	511	58	120	59	
Total inflow to Millerton Lake	1,228	3,355	262	670	55	330-1,250
San Joaquin River near Vernalis						
TULARE LAKE BASIN						
Kings River						
North Fork Kings River near Cliff Camp	239	565	50	120	50	
Total inflow to Pine Flat Reservoir	1,203	3,114	273	610	51	300-1,150
Kaweah River at Terminus Reservoir	284	814	61	135	48	75-300
Tule River at Success Reservoir	63	256	2	17	27	6-65
Kern River						
Kern River near Kernville	373	1,203	83	150	40	
Total inflow to Isabella Reservoir	462	1,657	84	165	36	105-480

(1) All 50-year averages are based on data for water years 1941-1990 except:
(2) 45-year average based on years 1936-80. (4) 36-year average based on years 1936-71.
(3) 44-year average based on years 1936-79. (5) See inside back cover for definition of unimpaired runoff and 80 percent probability ranges.

FORECASTS OF WATER YEAR UNIMPAIRED RUNOFF FOR CENTRAL VALLEY STREAMS FEBRUARY 1, 1992

Water Year October through September Unimpaired Runoff in 1,000's Acre-Feet												
HISTORICAL			* DISTRIBUTION								FORECASTS	
50 Year Average	Maximum of Record	Minimum of Record	October through January	February	March	April	May	June	July	August and September	Water Year Forecast	Percent of Average
856	1,964	165										
1,244	2,353	577										
3,145	5,150	1,484										
5,987	10,796	2,479	805	320	540	400	300	220	180	335	3,100 (2,500-4,750)	52
8,664	17,180	3,294	1,080	470	750	470	390	310	230	400	4,100 (3,150-6,800)	47
780	1,269	366										
2,417	4,400	666										
219	637	24										
291	562	32										
4,617	9,492	994	310	190	370	370	270	150	80	130	1,870 (1,150-3,600)	41
564	1,056	102										
181	292	30										
379	565	98										
2,390	4,926	369	120	100	200	260	190	80	20	20	990 (560-1,950)	41
616	1,234	66										
1,070	2,575	144										
318	705	59										
2,736	6,381	349	100	100	220	320	220	60	10	10	1,040 (530-2,300)	38
												42
385	1,253	20	7	14	32	25	10	4	1	1	95 (50-330)	25
626	1,009	197										
748	1,800	129	32	30	55	100	105	20	5	3	350 (210-700)	47
471	929	88										
1,150	2,952	155	60	40	95	140	150	50	20	5	560 (310-1,070)	49
461	1,147	123										
770	1,661	258										
1,882	4,430	383	83	70	150	240	320	110	30	7	1,010 (600-1,750)	54
461	1,020	92										
966	2,859	150	35	30	80	110	150	60	20	5	490 (300-870)	51
1,337	2,964	308										
112	298	14										
248	653	71										
1,776	4,642	362	70	50	110	190	290	150	40	30	930 (500-1,670)	52
												50
284	607	58										
1,669	4,294	383	70	40	90	160	270	150	30	30	840 (450-1,500)	50
444	1,402	92	20	15	30	40	60	30	5	5	205 (120-450)	46
145	615	16	7	10	15	10	5	1	1	1	50 (22-160)	34
558	1,577	163										
717	2,309	175	45	25	45	50	60	35	20	25	305 (210-800)	43

* Unimpaired runoff to date e Estimated

FORECASTS OF APRIL-JULY UNIMPAIRED RUNOFF FOR SELECTED CALIFORNIA STREAMS

FEBRUARY 1, 1992

DRAINAGE BASIN AND WATERSHED	April through July Unimpaired Runoff in 1,000 Acre-Feet				
	HISTORICAL			FORECASTS	
	50 Year Average(1)	Maximum of Record	Minimum of Record	April-July Forecast	Percent of Average
NORTH COAST AREA					
Trinity River at Lewiston	653	1,593	80	380	58
Scott River at Ft. Jones	200	*	*	100	50
Upper Klamath Lake(1)(2)(5)	521	1,151	177	na	na
LAHONTAN AREA					
Truckee River, Lake Tahoe to Farad accretion	268	713	58	110	41
Lake Tahoe Rise in feet (assuming gates closed)	1.5	3.75	0.23	0.4	27
East Carson River near Gardnerville	186	407	43	100	54
West Carson River at Woodfords	54	131	12	27	50
East Walker River near Bridgeport	63	209	7	23	37
West Walker River near Coleville	148	330	35	85	57
Owens River(1)(3)	301	728	131	172	57

(1)Forecast period of April-September

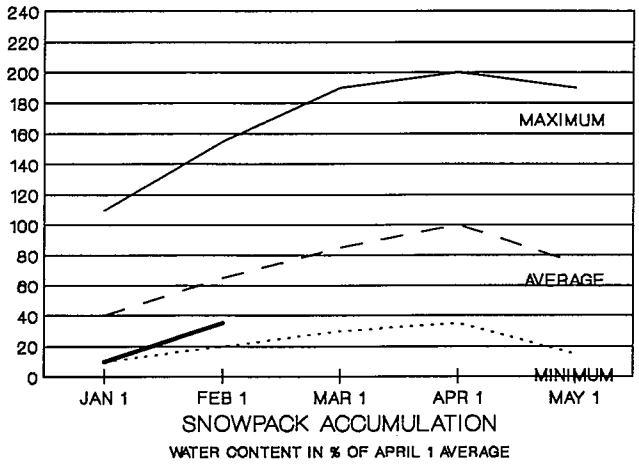
(2)Forecast by U.S. Soil Conservation Service, Portland, Or.

(3)Forecast by Dept. of Water and Power, City of Los Angeles

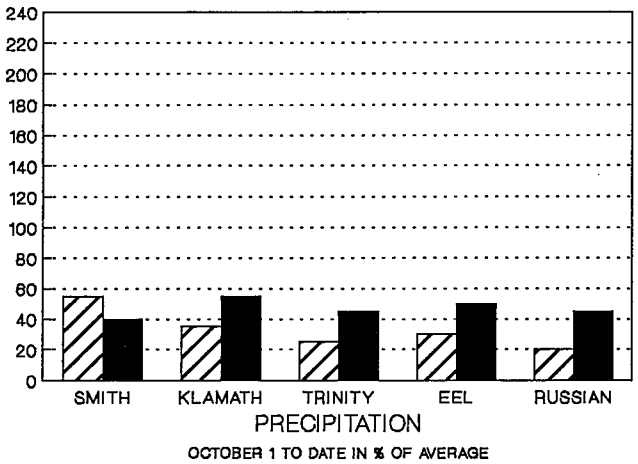
(4)Inside back cover for definition of unimpaired runoff.

(5)Average period of 25 years

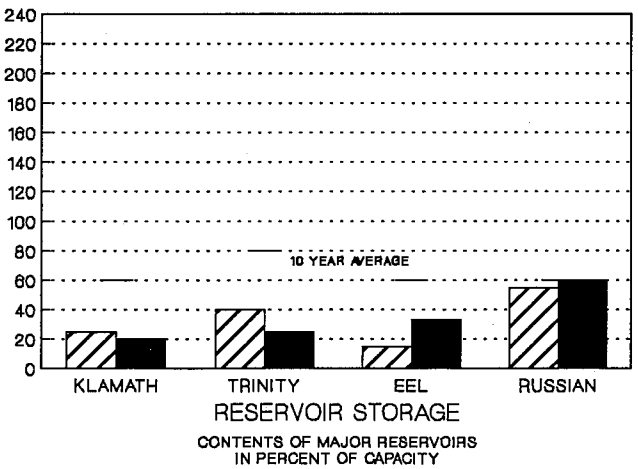
NORTH COAST AREA



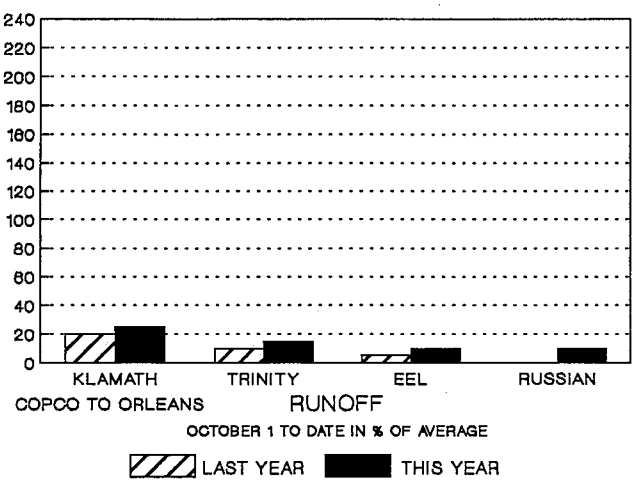
<u>SNOWPACK</u> - First of the month measurements made at 12 snow courses indicate an area wide snow water equivalent of 11.1 inches. This is 55 percent of the average for this date and about 35 percent of the seasonal (April 1) average. Last year at this time the pack was holding 3.2 inches of water.



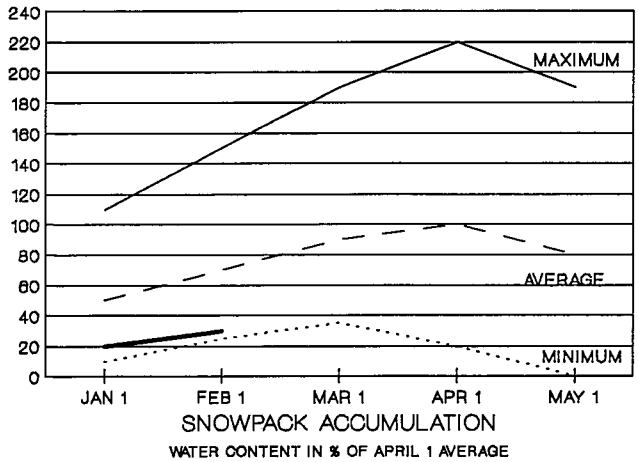
<u>PRECIPITATION</u> - Seasonal precipitation (October 1 through the end of last month) on this area was 45 percent of normal. Precipitation last month was about 45 percent of the monthly average. Seasonal precipitation at this time last year stood at 35 percent of normal.



<u>RESERVOIR STORAGE</u> - First of the month storage in 7 reservoirs was 0.9 million acre-feet which is 40 percent of average. About 25 percent of available capacity was being used. Storage in these reservoirs at this time last year was 55 percent of average.

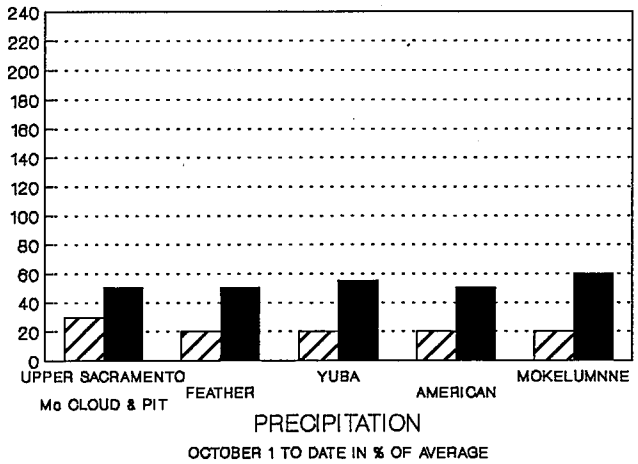


<u>RUNOFF</u> - Seasonal runoff of streams draining the area totaled 803 thousand acre-feet which is 15 percent of average for this period. Last year, runoff for the same period was 10 percent of average.

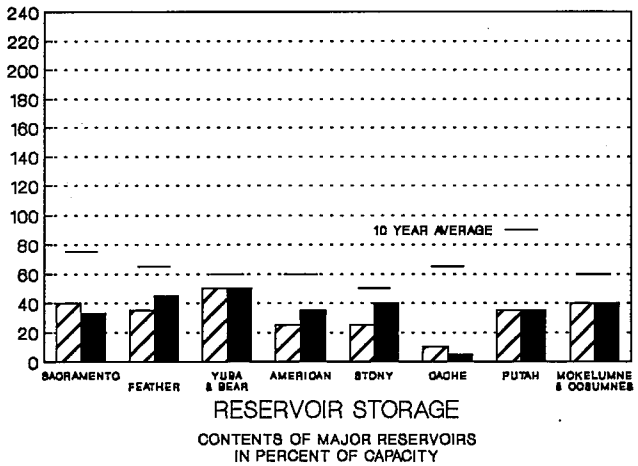


SACRAMENTO BASIN

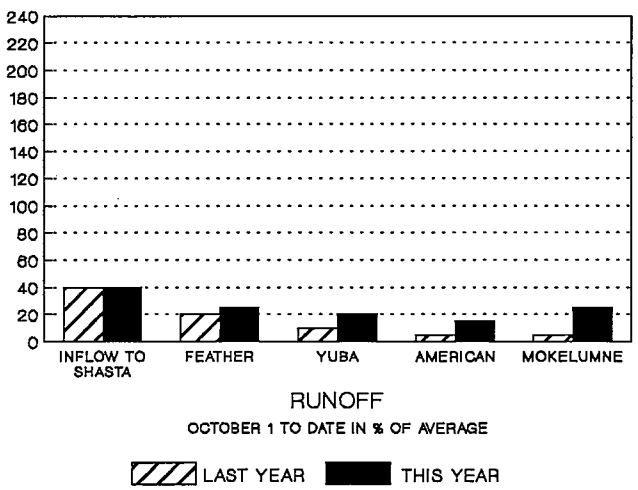
SNOWPACK - First of the month measurements made at 74 snow course indicate a basin wide snow water equivalent of 10.2 inches. This is 50 percent of the average for for this date and about 30 percent of the April 1 seasonal average. Last year at this time, the pack was holding 3.6 inches of water.



PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the Sacramento Basin was 50 percent of normal. Precipitation last month was about 30 percent of the monthly average. Seasonal precipitation at this time last year stood at 25 percent of average.

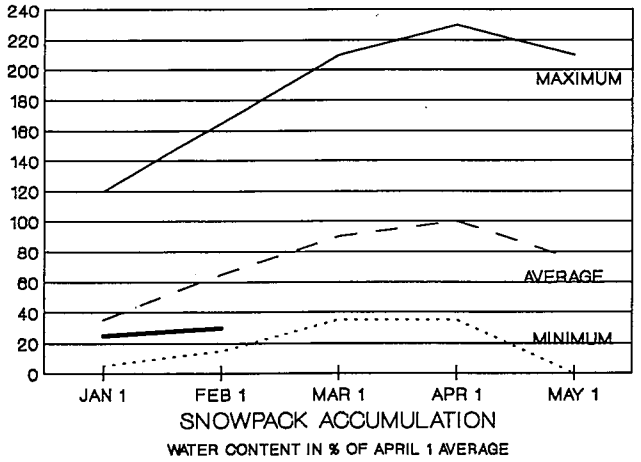


RESERVOIR STORAGE - First of the month storage in 43 reservoirs was 5.9 million acre-feet which is 55 percent of average. About 35 percent of available capacity was being used. Storage in these reservoirs was about 50 percent of average at this time last year.



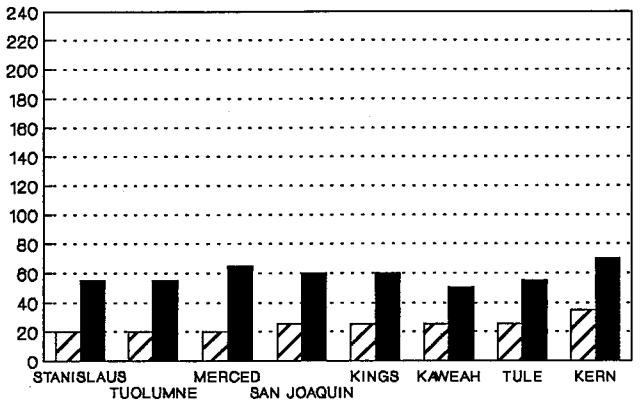
RUNOFF - Seasonal runoff from streams draining into the basin totaled 1.6 million acre-feet which is 30 percent of average for this period. Last year runoff for the same period was 20 percent of average.

The Sacramento River Index for the year is forecast at 8.0 million acre-feet assuming median meteorological conditions for the remainder of the year. This classifies the year as "critical" in the Sacramento-San Joaquin Delta according to the State Water Resources Control Board's Decision 1485. The SRI at this time last year was forecasted to be 6.7 million acre-feet.



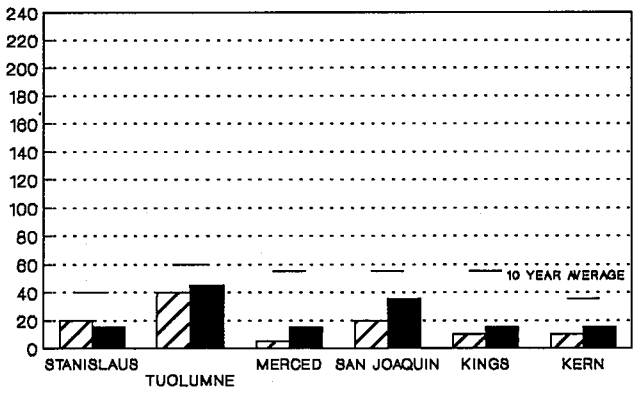
SNOWPACK ACCUMULATION

WATER CONTENT IN % OF APRIL 1 AVERAGE



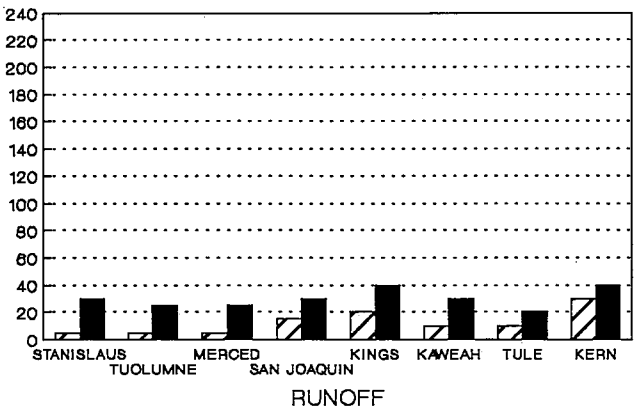
PRECIPITATION

OCTOBER 1 TO DATE IN % OF AVERAGE



RESERVOIR STORAGE

CONTENTS OF MAJOR RESERVOIRS IN PERCENT OF CAPACITY



RUNOFF

OCTOBER 1 TO DATE IN % OF AVERAGE

LAST YEAR THIS YEAR

SAN JOAQUIN AND TULARE LAKE BASINS

SNOWPACK - First of the month measurements made at 65 San Joaquin Basin snow courses indicate a basin wide snow water equivalent of 9.3 inches which is 45 percent of the average for this date and 30 percent of the seasonal (April 1) average. Last year at this time, the pack was holding 4.2 inches of water.

At the same time, 43 Tulare Lake Basin snow courses indicated a basin-wide snow water equivalent of 5.4 inches which is 40 percent of the average for this date and 25 percent of the seasonal average. Last year at this time, the Basin was holding 2.8 inches of water.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Joaquin Basin was 60 percent of normal. Precipitation last month was 35 percent of the monthly average. Seasonal precipitation at this time last year stood at 20 percent of normal.

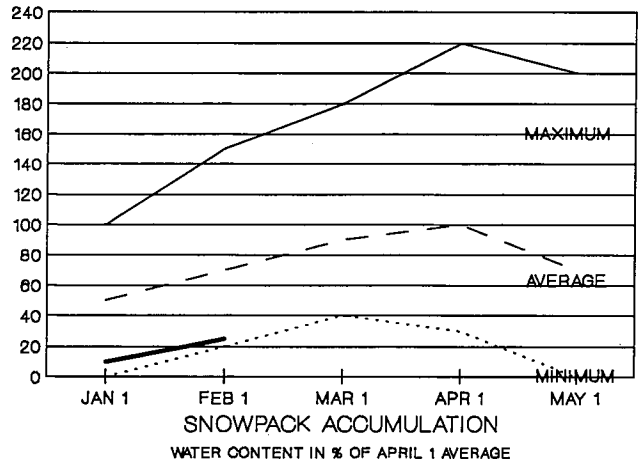
Seasonal precipitation on the Tulare Lake Basin was 65 percent of normal. Precipitation last month was 55 percent of the monthly average. Seasonal precipitation at this time last year stood at 30 percent of normal.

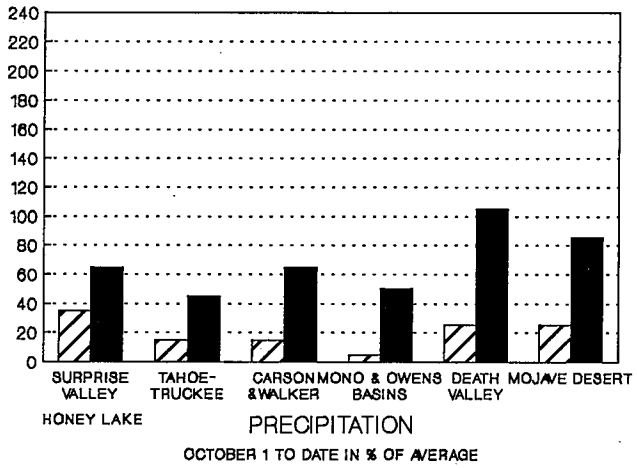
RESERVOIR STORAGE - First of the month storage in 33 San Joaquin Basin reservoirs was 3.9 million acre-feet which is 60 percent of average. About 35 percent of available capacity was being used. Storage in these reservoirs at this time last year was 45 percent of average.

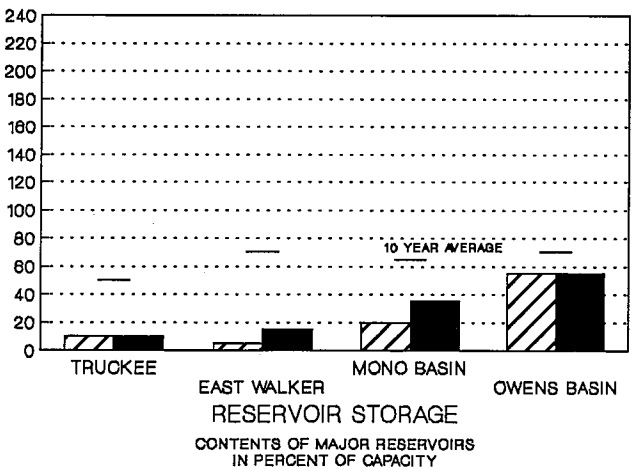
First of the month storage in 6 Tulare Lake Basin reservoirs was 316 thousand acre-feet which is 40 percent of average. About 15 percent of available capacity was being used. Storage in these reservoirs at this time last year was 25 percent of average.

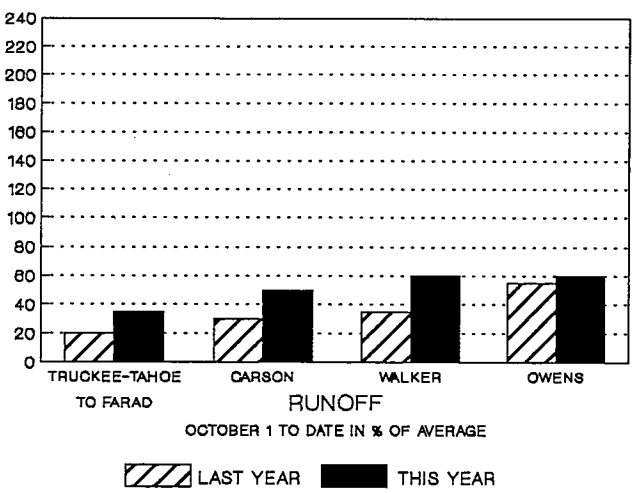
RUNOFF - Seasonal runoff of streams draining into the San Joaquin Basin totaled 287 thousand acre-feet which is 25 percent of average for this period. Last year, runoff for this same period was 5 percent of average.

Seasonal runoff of streams draining into the Tulare Lake Basin totaled 146 thousand acre-feet which is 35 percent of average for this period. Last year, runoff for this same period was 20 percent of average.









NORTH AND SOUTH LAHONTAN AREA

SNOWPACK - First of the month measurements made at 11 North Lahontan snow courses indicate an area wide snow water equivalent of 6.6 inches which is 40 percent of the average for this date and 25 percent of the seasonal (April 1) average. Last year at this time, the pack was holding 2.5 inches of water.

At the same time, 20 South Lahontan courses indicated an area-wide snow water equivalent of 8.1 inches which is 50 percent of the average for this date and 35 percent of the seasonal average. Last year at this time, the pack was holding 1.8 inches of water.

PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) over the North Lahontan area averaged 50 percent of normal. Precipitation last month was 10 percent of the monthly average. Seasonal precipitation at this time last year stood at 25 percent of normal.

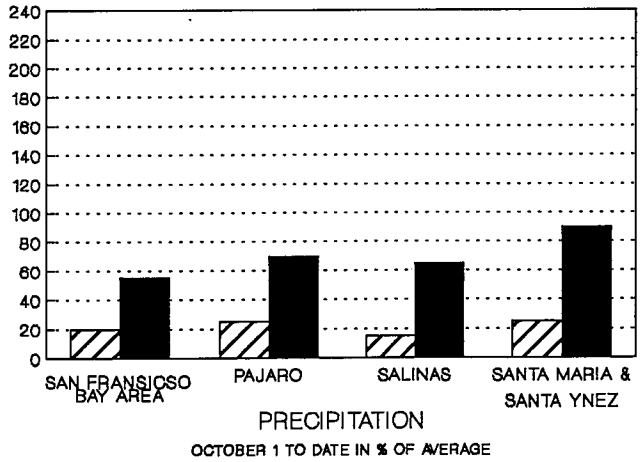
Seasonal precipitation over the South Lahontan area was 75 percent of normal. Last month's precipitation was 100 percent of the monthly average. Seasonal precipitation at this time last year stood at 20 percent of normal.

RESERVOIR STORAGE - First of the month storage in 5 North Lahontan reservoirs was 102 thousand acre-feet which is 15 percent of average. About 10 percent of available capacity was being used. Storage in these reservoirs at this time last year was 20 percent of average. Lake Tahoe was 1.6 feet below its natural rim on February 1.

First of the month storage in 8 South Lahontan reservoirs was 234 thousand acre-feet which is 80 percent of average. About 60 percent of available capacity was being used. Storage in these reservoirs at this time last year was 80 percent of average.

RUNOFF - Seasonal runoff of streams draining the North Lahontan area totaled 71 thousand acre-feet which is 45 percent of average for this period. Last year, runoff for this same period was 30 percent of average.

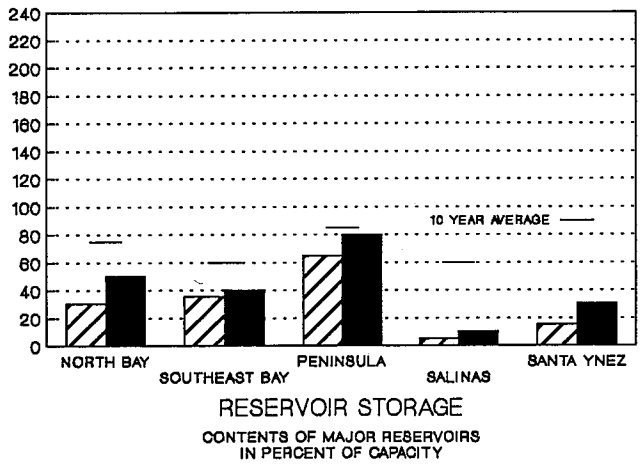
Seasonal runoff of the Owens River in the South Lahontan area totaled 27 thousand acre-feet which is 59 percent of average for this period. Last year, runoff for this same period was 53 percent of average.



SAN FRANCISCO AND CENTRAL COAST AREAS

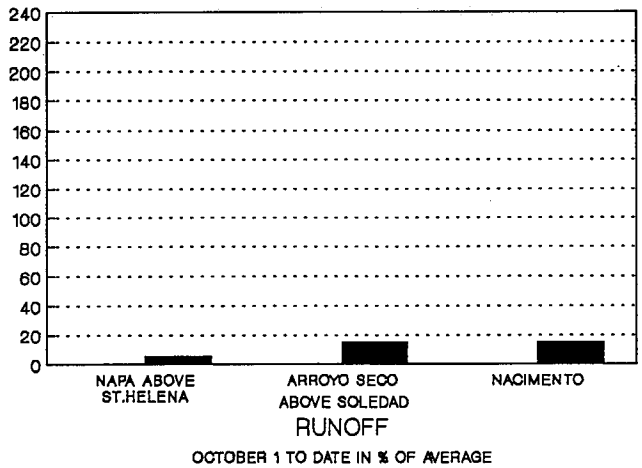
PRECIPITATION - Seasonal precipitation (October 1 through the end of last month) on the San Francisco Bay area was 55 percent of normal. Precipitation last month was 40 percent of the monthly average. Seasonal precipitation at this time last year stood at 20 percent of normal.

Seasonal precipitation on the Central Coast area averaged 75 percent of normal. Precipitation last month was 60 percent of the monthly average. Seasonal precipitation at this time last year stood at 20 percent of normal.



RESERVOIR STORAGE - First of the month storage in 18 major Bay area reservoirs was 321 thousand acre-feet which is 70 percent of average. About 45 percent of available capacity was being used. Storage in these reservoirs at this time last year was 60 percent of average.

First of the month storage in 6 major Central Coast reservoirs was 142 thousand acre-feet which is 25 percent of average. About 15 percent of available capacity was being used. Storage in these reservoirs at this time last year was 15 percent of average.



RUNOFF - Seasonal runoff of the Napa River in the San Francisco Bay area totaled one thousand acre-feet which is 3 percent of average for this period. Last year, runoff for this same period was 1 percent of average.

Seasonal runoff of selected Central Coast streams totaled 23 thousand acre-feet which is 20 percent of average for this period. Last year, runoff for this same period was less than one percent of average.

LAST YEAR THIS YEAR

SOUTH COAST AND COLORADO RIVER AREAS

PRECIPITATION - October through January (seasonal) precipitation on the South Coast area was 80 percent of normal. January precipitation was 80 percent of the monthly average. Seasonal precipitation at this time last year stood at 30 percent of normal.

Seasonal precipitation on the Colorado Desert area was 100 percent of normal. Precipitation in January was 130 percent of average. Seasonal precipitation at this time last year stood at 60 percent of average.

RESERVOIR STORAGE - February 1 storage in 29 major South Coast area reservoirs was 1.3 million acre-feet or 110 percent of average. About 65 percent of available capacity was being used. Storage in these reservoirs at this time last year was 95 percent of average.

On February 1 combined storage in Lakes Powell, Mead, Mohave and Havasu was about 36 million acre-feet or 95 percent of average. About 65 percent of available capacity was in use. Last year at this time, these reservoirs were storing 100 percent of average.

RUNOFF - Seasonal runoff from selected South Coast streams totaled 5 thousand acre-feet which is 30 percent of average. Runoff from these streams during January totaled 3.4 thousand acre-feet or 45 percent of average. Seasonal runoff from these streams last year was 15 percent of average.

COLORADO - The February 1 snowpack in the Upper Colorado River basin according to the U.S. Soil Conservation Service reports was 70 percent of average and ranges from 55 percent in the Duschesne Basin to 80 percent in the Upper Colorado Basin.
The April through July inflow to Lake Powell is forecast to be 5.7 million acre-feet which is 70 percent of normal.

CENTRAL VALLEY PROJECT

Water year forecasts for runoff into major CVP storage reservoirs range from 33 percent to 50 percent of average. CVP storage on September 30, 1991 was 3.3 million acre-feet.
As of January 31, 1992, storage remains at 3.3 million acre-feet, which is about 47 percent of normal for this date. The Bureau of Reclamation will advise its water customers by February 14th as to the availability of water deliveries in 1992.

STATE WATER PROJECT

On February 1, conservation storage (Oroville plus the State's share of San Luis) was 1.8 million acre-feet, or 39 percent of capacity. The SWP also has about 250 thousand acre-feet in groundwater storage south of the Delta.
Initial deliver approvals to SWP contractors was 20 percent of requested entitlement deliveries for both municipal and industrial and agricultural users. No increases in initial allocations will be made until significant improvement in the water supply is forecast.

MAJOR WATER DISTRIBUTION PROJECTS

RESERVOIR STORAGE

(AVERAGES BASED ON PERIOD RECORD)

RESERVOIR	CAPACITY 1,000 AF	AVERAGE STORAGE 1,000 AF	STORAGE AS OF JANUARY 31 1991 1,000 AF	1992 1,000 AF	PERCENT AVERAGE
STATE WATER PROJECT					
Oroville	3,540	2,487	921	1,277	51
San Luis SWP	1,060	900	66	524	58
Lake Del Valle	77	30	31	25	83
Silverwood	73	64	71	73	114
Pyramid Lake	171	162	160	159	98
Castaic Lake	324	243	195	305	125
Perris Reservoir	132	110	118	124	113
CENTRAL VALLEY PROJECT					
Clair Engle Lake	2,450	1,853	952	547	30
Shasta Lake	4,550	3,244	1,564	1,343	41
Whiskeytown	241	208	184	156	75
Folsom	975	547	155	349	64
New Melones	2,420	1,559	373	328	21
Millerton Lake	521	309	192	230	74
San Luis CVP	980	740	556	582	79
COLORADO RIVER PROJECT					
Lake Mead	26,300	19,706	20,061	19,780	100
Lake Powell	25,000	16,331	15,438	13,897	85
Lake Mohave	1,810	1,587	1,692	1,672	105
Lake Havasu	619	538	552	550	102
EAST BAY MUNICIPAL UTILITY DISTRICT					
Pardee	210	176	144	192	109
Camanche	432	253	144	116	46
East Bay (4 reservoirs)	151	122	119	117	96
CITY & COUNTY OF SAN FRANCISCO					
Hetch Hetchy	360	146	33	126	86
Cherry Lake	269	105	25	98	93
Lake Eleanor	28	9	0	1	11
South Bay (4 reservoirs)	223	159	85	116	73
CITY OF LOS ANGELES (DWP)					
Crowley Lake (Long Valley Reservoir)	183	127	99	114	91
Grant Lake	48	24	11	16	59
Other Aqueduct Storage (6 reservoirs)	95	63	71	45	71

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - FEBRUARY 1, 1992

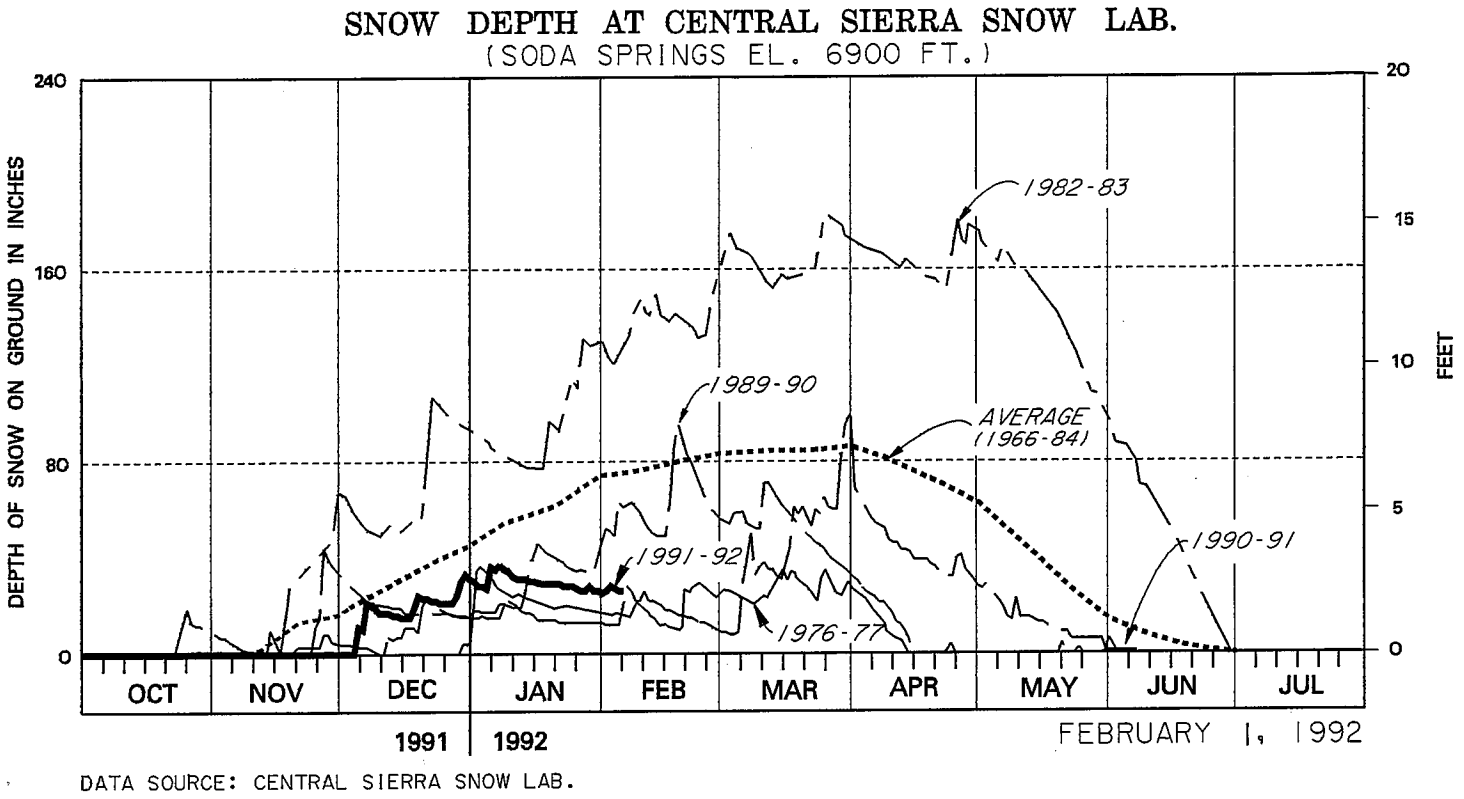
BASIN NAME / STATION NAME	AGENCY	ELEV FEET	APR 1 AVG	TODAY	INCHES OF WATER EQUIVALENT PERCENT OF APR 1	24 HRS AGO	1 WEEK AGO
TRINITY RIVER							
PETERSON FLAT	USBR	7150	----	9.0	----	9.1	8.6
RED ROCK MOUNTAIN	USBR	6700	39.6	17.0	43%	17.0	15.0
BONANZA KING	USBR	6450	40.5	11.0	27%	11.0	10.4
SHIMMY LAKE	USBR	6200	40.3	15.7	39%	15.7	14.4
MIDDLE BOULDER #3	USBR	6200	28.3	10.4	37%	10.4	10.4
HIGHLAND LAKES	USBR	6030	29.9	16.6	55%	16.6	15.5
SCOTTS MOUNTAIN	USBR	5900	----	8.3	----	8.5	8.3
MUMBO BASIN	USBR	5700	22.4	9.4	42%	9.4	9.1
BIG FLAT	USBR	5100	----	7.7	----	7.7	7.1
SACRAMENTO RIVER							
CEDAR PASS	SCS	7100	18.1	4.9	27%	4.9	4.6
BLACKS MOUNTAIN	DWR	7100	----	4.8	----	4.8	4.6
SAND FLAT	USBR	6750	42.4	10.2	24%	10.2	9.6
MEDICINE LAKE	USBR	6700	----	5.2	----	5.2	4.9
ADIN MOUNTAIN	SCS	6350	13.6	3.9	29%	----	3.8
SNOW MOUNTAIN	USBR	5950	27.0	8.3	31%	8.5	8.3
SLATE CREEK	USBR	5600	29.0	----	----	----	----
STOUTS MEADOW	USBR	5400	36.0	11.5	32%	11.6	10.6
FEATHER RIVER							
KETTLEROCK	DWR	7300	25.5	6.2	24%	6.1	5.9
GRIZZLY	DWR	6900	29.7	7.1	24%	7.1	7.0
PILOT PEAK	DWR	6800	52.6	6.6	13%	6.6	6.4
GOLD LAKE	DWR	6750	36.5	11.5	32%	11.4	11.0
HUMBUG	DWR	6500	28.0	13.6	48%	13.6	12.4
RATTLESNAKE	DWR	6100	14.0	5.4	39%	5.4	4.8
BUCKS LAKE	DWR	5750	44.7	19.2	43%	19.1	17.9
FOUR TREES	DWR	5150	20.0	10.6	53%	10.6	10.2
YUBA & AMERICAN RIV							
LAKE LOIS	DWR	8800	----	15.7	----	15.7	15.0
SCHNEIDERS	SMUD	8750	34.5	10.1	29%	9.7	9.5
CAPLES LAKE COURSE	USBR	7800	30.9	7.8	25%	7.9	7.6
ALPHA	SMUD	7600	35.9	10.4	29%	10.4	10.4
BETA	DWR	7600	----	7.6	----	7.6	7.4
FORNI RIDGE	USBR	7600	37.0	4.7	13%	4.7	4.7
SILVER LAKE	USBR	7100	22.7	4.9	22%	4.9	4.9
CENT SIERRA SNOW LAB	USFS	6950	33.6	7.6	23%	7.7	7.7
HUYSINK	USBR	6600	42.6	6.9	16%	6.9	6.9
VAN VLECK	SMUD	6700	35.9	9.3	26%	8.3	7.9
ROBBS SADDLE	SMUD	5900	21.4	7.4	35%	7.2	7.2
GREEK STORE	USBR	5600	21.0	9.9	47%	9.4	8.7
BLUE CANYON	USBR	5280	9.0	1.8	20%	2.2	2.8
ROBBS POWERHOUSE	SMUD	5150	5.2	3.2	62%	3.2	3.2
MOKEL. & STANIS. RIV							
DEADMAN CREEK	USBR	9250	37.2	7.3	20%	8.0	8.8
HIGHLAND MEADOW	USBR	8800	47.9	15.1	32%	15.1	14.6
GIANELLI MEADOW	USBR	8350	55.5	11.0	20%	11.0	10.8
LOWER RELIEF VALLEY	DWR	8100	41.2	11.2	27%	11.4	11.2
BLUE LAKES	SCS	8000	33.1	10.4	31%	10.5	10.3
MUD LAKE	SMUD	7900	44.9	15.4	34%	15.0	14.6
STANISLAUS MEADOW	USBR	7750	47.5	11.0	23%	11.0	10.7
BLOODS CREEK	USBR	7200	35.5	8.9	25%	8.9	8.9
BLACK SPRINGS	USBR	6500	32.0	8.5	26%	8.9	8.5
TUOLUMNE & MERCED R.							
DANA MEADOWS	DWR	9800	27.7	11.0	40%	11.0	11.0
SLIDE CANYON	DWR	9200	----	10.6	----	11.2	11.2
SNOW FLAT	DWR	8700	44.1	13.1	30%	13.1	12.4
TUOLUMNE MEADOWS	DWR	8600	22.6	4.9	22%	4.9	4.7
HORSE MEADOW	DWR	8400	48.6	11.8	24%	11.8	11.8
OSTRANDER LAKE	DWR	8200	34.8	9.2	26%	9.2	9.1
PARADISE	DWR	7650	----	12.8	----	12.8	11.5
GIN FLAT	DWR	7050	34.2	7.9	23%	7.9	7.8
LOWER KIBBIE	DWR	6600	27.4	6.9	25%	7.1	8.1
SAN JOAQUIN RIVER							
VOLCANIC KNOB	USBR	10100	30.1	7.8	26%	7.2	7.2
AGNEW PASS	USBR	9450	32.3	7.2	22%	7.2	7.2
KAISER POINT	USBR	9200	37.8	6.9	18%	6.9	6.9
GREEN MOUNTAIN	USBR	7900	30.8	6.3	20%	6.3	6.1

DEPARTMENT OF WATER RESOURCES - CALIFORNIA DATA EXCHANGE CENTER
TELEMETERED SNOW WATER EQUIVALENTS - FEBRUARY 1, 1992

BASIN NAME / STATION NAME	AGENCY	ELEV FEET	APR 1 AVG	TODAY	INCHES OF WATER EQUIVALENT PERCENT OF APR 1	24 HRS AGO	1 WEEK AGO
TAMARACK SUMMIT	USBR	7600	30.5	----	----	8.1	----
CHILKOOT MEADOW	USBR	7150	38.0	10.6	28%	10.6	10.6
HUNTINGTON LAKE	USBR	7000	20.1	7.7	38%	7.7	7.7
GRAVEYARD MEADOW	USBR	6900	18.8	4.3	23%	4.5	4.7
POISON RIDGE	USBR	6900	28.9	9.3	32%	9.3	9.3
KINGS RIVER							
BISHOP PASS	DWR	11200	----	6.5	----	6.5	7.2
CHARLOTTE LAKE	DWR	10400	----	5.9	----	5.9	5.9
STATE LAKES	USCE	10400	29.0	4.6	16%	4.6	4.8
MITCHELL MEADOW	USCE	10375	32.9	10.7	33%	10.7	11.0
BLACKCAP BASIN	USBR	10300	34.3	.7	2%	----	.7
UPPER BURNT CORRAL	DWR	9700	34.6	11.8	34%	11.8	11.8
WEST WOODCHUCK MDW	USCE	9100	32.8	5.0	15%	5.2	5.3
BIG MEADOWS	DWR	7600	25.9	6.4	25%	6.5	6.5
KAWEAH & TULE RIVERS							
QUAKING ASPEN	DWR	7200	21.0	7.4	35%	7.4	7.4
GIANT FOREST	USCE	6400	10.0	1.6	16%	1.7	2.7
KERN RIVER							
UPPER TYNDALL CREEK	USCE	11500	27.7	4.6	17%	4.6	4.7
CRABTREE	DWR	10700	19.8	3.5	18%	3.5	3.2
CHAGOOPA PLATEAU	DWR	10300	21.8	6.5	30%	6.5	5.9
PASCOES	USCE	9150	24.9	5.1	20%	5.1	5.1
TUNNEL	DWR	8950	15.6	2.8	18%	2.4	2.6
WET MEADOW	USCE	8900	30.3	7.6	25%	7.6	7.6
CASA VIEJA MDW	DWR	8400	20.9	5.2	25%	5.2	5.2
BEACH MEADOW	DWR	7650	11.0	----	----	----	----
SURPRISE VALLEY AREA							
DISMAL SWAMP	SCS	7050	29.2	8.3	28%	8.4	8.0
TRUCKEE RIVER							
MOUNT ROSE SKI AREA	SCS	8850	38.5	11.4	30%	11.5	11.5
INDEPENDENCE LAKE	SCS	8450	41.4	9.4	23%	9.4	9.5
BIG MEADOWS	SCS	8700	25.7	4.2	16%	----	4.2
INDEPENDENCE CAMP	SCS	6500	21.8	5.6	26%	5.7	5.6
INDEPENDENCE CREEK	SCS	6500	12.7	4.2	33%	4.3	4.0
LAKE TAHOE BASIN							
HEAVENLY VALLEY	SCS	8800	28.1	9.4	33%	9.4	9.6
HAGANS MEADOW	SCS	8000	16.5	4.1	25%	4.1	4.1
MARLETTE LAKE	SCS	8000	21.1	5.2	25%	5.2	5.2
ECHO PEAK	SCS	7800	39.5	----	----	12.4	----
RUBICON NO. 2	SCS	7500	29.1	4.1	14%	4.0	4.1
WARD CREEK NO. 3	SCS	6750	39.4	7.4	19%	7.4	----
FALLEN LEAF LAKE	SCS	6300	7.0	1.7	24%	1.6	1.7
CARSON RIVER							
EBBETTS PASS	SCS	8700	38.8	10.3	27%	10.0	10.0
POISON FLAT	SCS	7900	16.2	6.6	41%	6.6	6.2
WALKER RIVER							
VIRGINIA LAKES RIDGE	SCS	9200	20.3	5.3	26%	5.3	5.3
LOBDELL LAKE	SCS	9200	17.3	7.1	41%	7.0	7.0
SONORA PASS BRIDGE	SCS	8750	26.0	8.4	32%	8.9	8.3
LEAVITT MEADOWS	SCS	7200	8.0	2.5	31%	2.8	2.1
OWENS RIVER/MONO LK.							
GEM PASS	LADWP	10750	31.7	8.5	27%	8.5	8.5
SAWMILL MEADOW	DWR	10300	19.4	4.6	24%	4.6	4.6
COTTONWOOD LAKES	LADWP	10200	11.6	4.0	34%	4.0	4.1
BIG PINE #3	LADWP	9800	17.9	2.6	15%	2.6	2.6
SOUTH LAKE	LADWP	9600	16.0	2.2	14%	2.2	2.2
MAMMOTH PASS (RP)	USBR	9500	42.4	10.6	25%	10.6	10.6
MAMMOTH PASS-6 TANKS	USBR	9500	----	8.7	----	8.7	8.7
ROCK CREEK	LADWP	8200	----	2.9	----	2.8	2.9

NORMAL SNOWPACK ACCUMULATION EXPRESSED AS A PERCENT OF APRIL 1ST AVERAGE

AREA	JANUARY	FEBRUARY	MARCH	APRIL	MAY
CENTRAL VALLEY NORTH	45	70	90	100	75
CENTRAL VALLEY SOUTH	45	65	85	100	80
NORTH COAST	40	60	85	100	80



❄❄❄❄❄ SNOWLINES ❄❄❄❄

FALL REPORT - Acquiring and processing data for this annual water year data summary has been particularly slow this year. Work on the report is proceeding and it will be mailed as soon as possible.

NEW PHONE NUMBERS AND ADDRESS- The State installed a new telephone system in its Sacramento office last fall. New numbers for the Snow Surveys staff are:

Frank Gehrke	916-653-8255
Dave Hart	916-653-4541
Matt Colwell	916-653-8273
Common Line	916-653-8292

Our new office address is Room 1609-11, 1416 -9th Street, Sacramento, CA 95814. Mail should continue to be sent to the old Post Office Box number which appears on the back cover of this bulletin.

HERM RAIMUNDO - Armando "Herm" Raimundo made the move that all of us will make sooner or later. Herm retired at the end of 1991 with 34 years of State service. Many of these years were with the Snow Surveys Program. Congratulations and best wishes.

NEW BASE PERIOD FOR AVERAGES - Periodically the base periods used to compute averages are updated to reflect more current hydrometeorologic conditions. This update will generally lower averages. For example, this report uses 1941-90 50-year averages for major river runoff. This reduced the averages slightly from last year's reports due to the inclusion of data from four years of the current drought.

SNOWPACK- Snow data is a major index of spring and summer runoff from Sierra Nevada watersheds. April 1 data historically reflects the magnitude of the snowpack at or near the maximum seasonal accumulation. Averages are based on April 1 data for the period 1941-1990 (50 years, except for data sites established after 1941.)

PRECIPITATION- Averages are based on the period 1941-1990 (50 years, except for data sites established after 1931.)

RUNOFF AND FORECASTS- Runoff data and runoff forecasts are shown as unimpaired values. Unimpaired runoff represents the natural water production of a river basin, unaltered by upstream diversions, storage, or by export or import of water to or from other watersheds. Forecast of runoff assumes median conditions subsequent to the date of forecast.

Runoff probability ranges are statistically derived from historical data. The 80 percent probability range is comprised of the 90 percent exceedence level value and the 10 percent exceedence level value. This means that actual runoff should fall within the stated limits eight times out of ten.

Runoff averages for most streams are based on the 50 year period (1941-1990). For more details, contact California Cooperative Snow Surveys, P.O. Box 942836, Sacramento, CA 94236-0001, (916) 445-2196.

On the Front Cover

DWR snow surveyors Conrad Lahr and Jon Haman measure the Eureka Lake snow course in the Feather River Basin

Photo by Dave Hart

State of California—The Resources Agency
DEPARTMENT OF WATER RESOURCES
P.O. Box 942836
Sacramento CA 94236-0001

FIRST CLASS